



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: BR700-710A2-20 BYPASS RATIO: 4.2
 UNIQUE ID NUMBER: 01P04BR013 PRESSURE RATIO (π_{00}): 24.2
 COMBUSTOR:
 ENGINE TYPE: MTF RATED THRUST (F_{00}) (kN): 65.6

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	3.8	79.6	49.3	18.0
AS % OF ORIGINAL LIMIT	19.2	67.4	55.8	67.6
AS % OF CAEP/2 LIMIT (NO _x)			69.7	
AS % OF CAEP/4 LIMIT (NO _x)			78.7	
AS % OF CAEP/6 LIMIT (NO _x)			84.6	
AS % OF CAEP/8 LIMIT (NO _x)			96.0	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 - OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.714	0.02	1.04	18.73	14.0
CLIMB OUT	85	2.2	0.595	0.02	0.93	15.03	11.9
APPROACH	30	4.0	0.214	0.05	4.81	7.67	0.3
IDLE	7	26.0	0.089	1.12	28.00	4.67	0.6
LTO TOTAL FUEL (kg) or EMISSIONS (g)			299	160	4239	2784	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				2.4	64.8	42.5	14.0
SIGMA (D _p /F ₀₀ in g/kN, or SN)							
RANGE (D _p /F ₀₀ in g/kN, or SN)				2.19-2.7	64.31-65.59	41.81-42.91	12.6-15.15

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	100.9-101.2
TEMPERATURE (K)	282.9-286.7
ABS HUMIDITY (kg/kg)	0.0064-0.0087

FUEL

SPEC	AVTUR
H/C	1.89-1.92
AROM (%)	16.4-18

MANUFACTURER: Rolls-Royce Deutschland
 TEST ORGANIZATION: BMW Rolls-Royce GmbH
 TEST LOCATION: Dahlewitz
 TEST DATES: 19/10/1996-20/10/1996

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

1. Data from Certification report E-TR853/96-(FR) ISS01.
2. For Canadair Global Express application
3. Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
4. NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements: -

('x' if complies, 'PR' if pre-regulation, '-' if information is not available)